

Guide
for the

SELECTION AND APPLICATION

OF WINDOW SHADES

AND THEIR ROLLERS

STEWART HARTSHORN COMPANY

*The Standard
of Quality*

Hartshorn

Established 1860

WINDOW SHADE ROLLERS AND WINDOW SHADE CLOTHS

HARTSHORN

WINDOW
SHADE
ROLLERS

WINDOW
SHADE
CLOTHS

SPRING
AWNING
ROLLERS

Specializing in Shade Cloth and Rollers. Stewart Hartshorn Company specializes in the manufacture of automatic spring rollers and shade cloth for use in window shades. All of their efforts and inventive genius are directed to the improvement of the quality and mechanical parts which go into making an efficient window shade.

Hartshorn Shade Rollers Since 1860. The Hartshorn Company manufactured the first automatic spring shade roller ever made in 1860. For over three-quarters of a century, they have been improving on the original design and have been solving problems in this field given to them by architects and engineers.

Hartshorn Window Shade Cloth. Nearly twenty-five years ago, Stewart Hartshorn Company purchased the Oswego Shade Cloth Company which had at that time been manufacturing high quality shade cloths for over thirty years.

Hartshorn Spring Awning Rollers. In addition to manufacturing window shade rollers for residences and other types of buildings, the Hartshorn Company make a variety of automatic spring rollers for automobiles, railway cars, insect screens, etc. One of the most important of these special rollers is their awning spring roller which permits the quick rolling up of an awning and works on the same principle on which the window shade roller is used.



STEWART HARTSHORN COMPANY

Established 1860

250 Fifth Avenue, NEW YORK, N. Y.

SUBSIDIARIES

OSWEGO SHADE CLOTH COMPANY
OSWEGO, N. Y.

CALIFORNIA SHADE CLOTH COMPANY
SAN FRANCISCO, CALIFORNIA

AMERICAN SHADE CLOTH COMPANY
CHICAGO, ILL., DETROIT, MICH., AND COLUMBUS, OHIO

WINDOW SHADES

Their Importance to the Occupants and the Building

CONTROL OF LIGHT BY PROPER SHADING

Hartshorn shade cloths are made in a variety of grades and colors. Among the grades listed on Page 4 of this booklet, you will find shade cloths to control any lighting problem. We make translucent, semi-opaque, opaque and lightproof shade cloths.

The colors used in each of the grades also vary in opacity. Light translucent colors let in a maximum of light but keep out the glare. Medium and dark opaque colors and duplex combinations keep out the glare and darken the room.

HARTSHORN WINDOW SHADES CAN KEEP OUT GLARE OR KEEP OUT LIGHT

Joanna Cambric, Oswego Tint Cloth, Washable Diana Cloth and Hartshorn Satin Finish cloth are translucent in the lighter colors, semi-translucent in the medium colors and opaque in the dark colors and duplex combinations. Chouaguen Hand Made Opaque

and Oswego Opaque Cambric are semi-opaque in the light colors and opaque in the medium and dark colors and the duplex combinations. Vulcan Shadowless Trip-lex is absolutely opaque and lightproof in all colors and duplex combinations.

SHADES CAN KEEP OUT HEAT IN SUMMER AND COLD IN WINTER

Depending on the type of shade cloth used, rooms with window shades can be kept from 10 to 30 degrees warmer in winter and cooler in summer. It has long been common practice to pull window shades down completely during cold winter nights and the hot sum-

mer days. By doing this an air pocket is formed between the window and the shade keeping the warm air of the room from contact with the cold windows in the winter and keeping the hot rays of the sun from entering the room in the summer.

RELATION OF SHADES TO AIR-CONDITIONING

Research in conjunction with general air-conditioning manufacturers, has produced a special type of

shade which adds to the efficiency of air-conditioning units.

IMPORTANCE IN COLOR SCHEME OF A BUILDING

There is nothing more attractive than a building or residence where the window shades have been chosen so that their color and texture harmonizes with the building. Some tenants like to install innovations in color and design which may be attractive when seen

from the interior of the tenants' rooms but which detract from the outside appearance of the building. For a situation such as this, two sets of shades may be installed—one color to match the building exterior and the other to match the interior color scheme.

PREFERENCE AS TO COLOR

The architect should pay as much attention to the color selection of shades in a residence as he does to the exterior color of the house or the color of the blinds or trim. Bedrooms should have two sets of shades—one dark opaque or semi-opaque color to be drawn in the night time and early morning and one light cheerful neutral color for the day time. In Living Rooms, Dining Rooms, etc., the trend is to light cheerful colors that

let in the light but keep out the glare. In sun rooms, kitchens and pantries, vivid bright colors are most popular. Stewart Hartshorn Company manufactures two types of shade colors in their better grade cloths: solid color shade cloth with the same color on both sides; Duplex (2) color shade cloth with one color on one side of the cloth and another color on the other side.

TYPES OF SHADES AND ROLLERS FOR VARIOUS TYPES OF BUILDINGS

Type of Use	Hartshorn Rollers		Hartshorn Shade Cloths						
	Wood	Metal	Joanna Cambric	Oswego Tint Cloth	Oswego Opaque Cambric	Washable Diana Cloth	Vulcan Shadowless Triplex	Satin Fin. Shade Cloth	Chouaguen Hand Made Opaque
RESIDENCES — BETTER GRADE									
General Use Translucent Shades	✓		Light Solid Colors	Light Solid Colors	Light Solid Colors	Light Solid Colors or Stripes			
Bedrooms Semi-Opaque or Opaque Shades	✓		Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Light, Dark or Duplex Colors		
RESIDENCES — INEXPENSIVE									
General Use Translucent Shades	✓							Light Solid Colors	Light Solid Colors
Bedrooms Semi-Opaque or Opaque Shades	✓							Dark, Sol- id Colors or Duplex	Dark Solid Colors or Duplex
APARTMENTS — HIGH GRADE									
General Use Translucent Shades		✓	Light Solid Colors	Light Solid Colors	Light Solid Colors	Light Solid Colors or Stripes			
Bedrooms Semi-Opaque or Opaque Shades		✓	Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Light, Dark or Duplex Colors		
APARTMENTS — LOW RENTAL									
General Use Translucent Shades	✓					Light Solid Colors		Light Solid Colors	Light Solid Colors
Bedrooms Semi-Opaque or Opaque Shades	✓					Dark or Du- plex Colors		Dark or Duplex Colors	Dark or Duplex Colors
SCHOOLS (double hung shades)									
Offices and Classrooms		✓	Light Solid Colors	Light Solid Colors	Light Solid Colors	Light Solid Colors			
Auditoriums Laboratories Dark Rooms		✓					Light, Dark or Duplex Colors		
HOTELS									
General Use		✓	Light Solid Colors	Light Solid Colors	Light Solid Colors	Light Solid Colors or Stripes			
Bedrooms		✓	Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Dark Solid Colors or Duplex	Light, Dark or Duplex Colors		
HOSPITALS (double hung shades)									
Bedrooms Laboratories X-Ray Rooms		✓					Light, Dark or Duplex Colors		
OFFICES — PUBLIC BUILDINGS — LIBRARIES									
General Use		✓	Light Solid Colors	Light Solid Colors	Light Solid Colors	Light Solid Colors or Stripes			

HARTSHORN SHADE CLOTHS

WHAT DETERMINES QUALITY IN SHADE CLOTHS

1. The better grade shade cloths are manufactured on a closely woven cotton fabric containing 124 to 152 threads to the square inch and have no filling material in them.
2. In this country where the extremes of temperature and climate are great, it has been found that unfilled, hand painted and pyroxylin impregnated cloths are most efficient in many ways.

THE DIFFERENCE BETWEEN HAND PAINTED AND PYROXYLIN IMPREGNATED SHADE CLOTHS

Hand painted shade cloths are literally painted by hand with linseed oil paints. They can be manufactured in an endless variety of solid colors and two color combinations to match any color scheme required.

Pyroxylin impregnated shade cloths are processed on a machine which forces colored pyroxylin, a cellulose material, into the fibres of the cotton fabric. Pyroxylin shade cloth is made in a limited number of colors and two color combinations and stripes.

HAND PAINTED SHADE CLOTHS MOST SATISFACTORY

Hand painted unfilled shade cloths have long been recognized in the industry as the most durable of all shade cloths. The pure linseed oil which is used in the paint preserves the fabric, protects it from the heat rays of the sun and tends to keep the shade cloth pliable and flexible for years. Their colors are sunproof and the cloth will not crack or curl. These shades can be brushed clean or cleaned with standard dirt removers.

Pyroxylin impregnated shade cloths can be scrubbed and washed with soap and water. They do not, however, have the wearing qualities present in the hand painted unfilled shade cloths due to the absence of the linseed oil preservative.

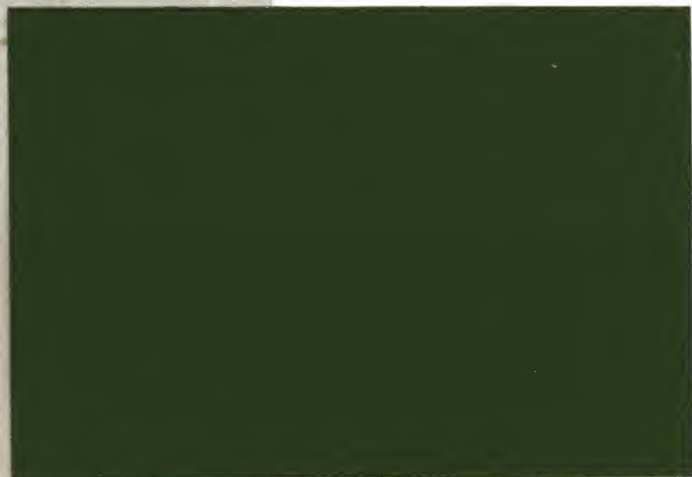
Many less expensive shade cloths than those listed in this booklet are manufactured in this country. In order to cut the cost of manufacture, these cloths are made on loosely woven cotton fabric and to make up for the lack of high thread count, are filled with various fillers and binders which give them weight and body. It is easy to spot a filled shade cloth. Simply rub the samples together in your hand—the filling will drop out exposing a loosely woven cotton fabric foundation. It is possible to rub the paint off an unfilled piece of shade cloth but the fabric left will be closely woven and strong.



TYPES OF SHADE CLOTH MANUFACTURED BY HARTSHORN

Stewart Hartshorn Company manufactures in their own factories hand painted unfilled shade cloth, pyroxylin impregnated shade cloth, triplex lightproof shade cloth, satin finish shade cloth, filled machine painted shade cloth, filled Holland shade cloth, filled water color shade cloth as well as variations of all the above types.

TYPES AND QUALITIES OF



OSWEGO TINT CLOTH
SOLID COLOR 522

HARTSHORN

OSWEGO

TINT CLOTH

Finest quality. Use—suitable for all types of buildings, residences, schools, public buildings, offices and factories. Similar in quality to Joanna Cambric but has no waterproofed glossy finish. Hand painted—unfilled—sunproof and moisture proof—wide variety of colors, solid and duplex—translucent and semi-opaque colors. 144 to 152 threads to the square inch. Conforms to Federal Specification CCC-C-521.



OSWEGO OPAQUE CAMBRIC
DUPLEX COLOR—Light Ecu one side,
and Dark Green, other side.

HARTSHORN

OSWEGO

OPAQUE CAMBRIC

Finest quality. Use—suitable for hotels, schools and other public buildings where subject to hard usage. Same in quality as Tint Cloth but due to heavier coating of paint is more opaque. Hand painted—unfilled—cleanable—sunproof and moisture proof—wide variety of colors, solid and duplex—semi-opaque and opaque colors—144 to 152 threads to the square inch. Conforms to Federal Specification CCC-C-521.



WASHABLE DIANA CLOTH
SOLID COLOR MAUVE

HARTSHORN

DIANA CLOTH

WASHABLE

Pyroxylin impregnated—finest quality. Use—suitable for all types of buildings, residences, schools, public buildings, offices and factories. Washable with soap, water and scrubbing brush. Complete line of attractive colors, solid, duplex and striped—translucent and semi-opaque colors. 144 to 152 threads to the square inch. Conforms to Federal Specification CCC-C-521.

NOTE:

"SOLID COLOR" means the same color on both sides.

"DUPLEX COLOR" means one color on one side and another color on other side.

HARTSHORN WINDOW SHADES

HARTSHORN

JOANNA

CAMBRIC (Not shown here)

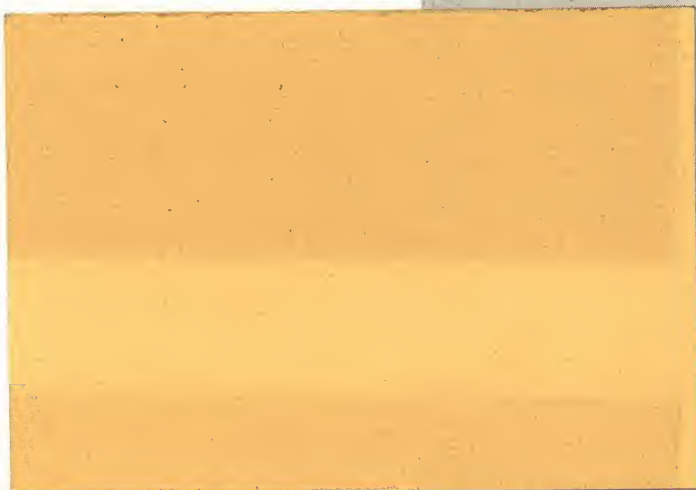
Finest quality. Use—suitable for all types of buildings—residences, schools, public buildings, offices and factories. Hand painted—unfilled—cleanable—satin finish—translucent and semi-opaque colors—sunproof and waterproofed—wide variety of colors, solid and duplex—144 to 152 threads to the square inch. Conforms to Federal Specification CCC-C-521.

HARTSHORN

VULCAN

SHADOWLESS TRIPLEX

Finest quality. This grade of goods is made especially for school auditoriums, dark rooms, X-ray laboratories, etc., where all light must be excluded. Suitable also for hotel and residential bed rooms and in places where opaque durable window shades are required. Hand painted—unfilled—cleanable—sunproof and moisture proof—wide variety of colors, solid and duplex—absolutely opaque. Shadow boxes are usually installed for this type of shade. We are glad to give the architect the benefit of our long experience in solving problems of this kind. 144 to 152 threads to the square inch. Conforms to Federal Specification CCC-C-521.



VULCAN SHADOWLESS TRIPLEX
SOLID COLOR ECRU

HARTSHORN

SATIN FINISH

SHADE CLOTH (Not shown here)

Good quality. Use—suitable for medium priced residences; not recommended for schools, public buildings, offices or factories. Hand painted—satin finish—unfilled—sunproof and waterproofed—cleanable—wide variety of colors, solid and duplex—translucent and semi-opaque colors. 124 threads to the square inch.



CHOUAGUEN HAND MADE OPAQUE
SOLID COLOR 48

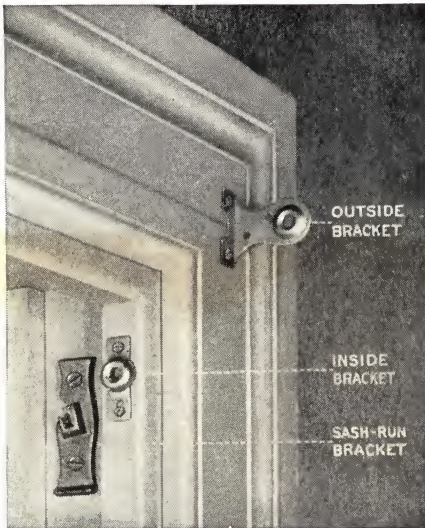
HARTSHORN

CHOUAGUEN

HAND MADE OPAQUE

Good quality. Use—suitable for medium priced residences, not recommended for schools, public buildings, offices or factories. Hand painted—unfilled—sunproof—cleanable—wide variety of colors, solid and duplex—semi-opaque and opaque colors. Similar in quality to Satin Finish shade cloth but has no waterproofed glossy finish. 124 threads to the square inch.

RELATION OF SHADE TO THE WINDOW OPENING



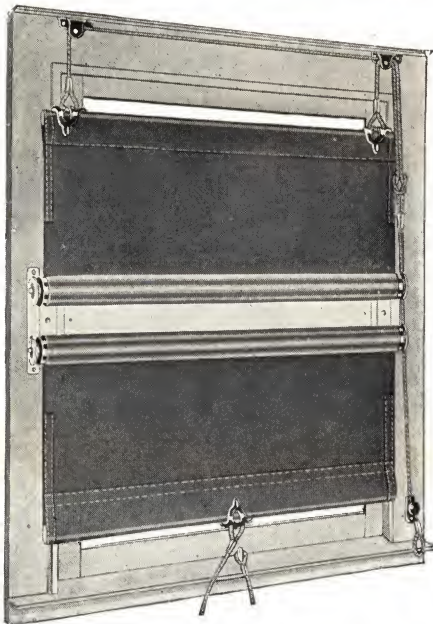
Shades to Lap Over Opening or Jamb Reveal to be Efficient

To definitely control the entrance of light into the room, window shades should be mounted on the face of the casing. Width of cloth should be at least 3 inches more than opening, leaving a minimum of $1\frac{1}{2}$ inches lap on each side of casing. Use outside brackets.

If construction of window or drapery arrangement does not allow above type of installation, shades should be mounted on stop or bead of window. Cloth should be cut and mounted within $\frac{1}{8}$ of an inch of end of roller barrel so as to prevent as much light as possible from coming around edges of shade. Use inside brackets.

If construction of window does not permit shade to be mounted on casing or bead, shade should be mounted on sash run of the window and Hartshorn Special Sash Run #374 brackets should be used. Cloth should be cut and mounted $\frac{1}{8}$ of an inch from end of roller barrel.

All shades installed on casing should be cut 12 inches longer than window openings. Shades installed on bead or sash run should be cut 9 inches longer than window openings.



Relation to Screens

Where possible metal insect screens should be installed outside of the window sash. On some special type of windows it is necessary to allow for installation of screens inside of sash between the sash and the window shades.

Window Shades for Schools, Offices, Hospitals and Public Buildings

Where complete control of light and ventilation is necessary and where decorative values are not quite so important, double hung window shades equipped with Hartshorn light shields (see illustration at left) are found to be most satisfactory. Both shades and light shield in this Hartshorn equipment can be removed and replaced easily when windows are being cleaned.

Finish in Edges of Shades

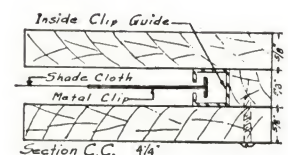
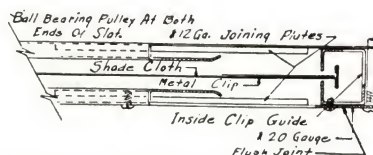
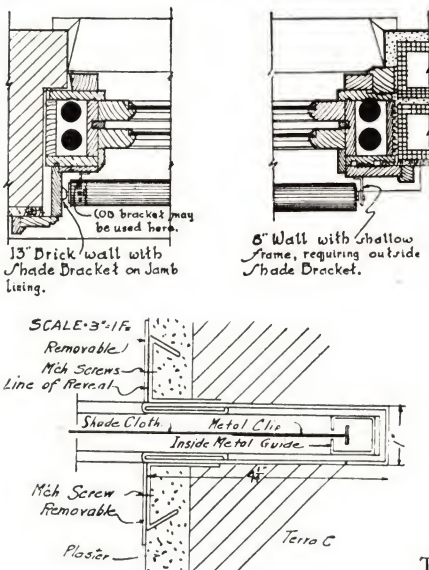
High grade shade cloths even when the shades are mounted on the bead or sash run of the window do not fray at the edges unless badly abused. It is practical, however, and sometimes quite attractive to have side hems used on even the best grade of shade cloth. Reinforcing pockets at the bottom and sides of shades prevent tearing of shades edge above the bottom hem containing the wood slat. This is especially recommended for schools, office buildings, public buildings, etc. See reinforcing pockets on double hung shades at side of page.

Shades for Light Proof Requirements in Laboratories, Auditoriums, X-ray Rooms, etc.

Information regarding such installations together with approved types of shadow boxes to keep light from coming in around the edges of the shades will be supplied on request.

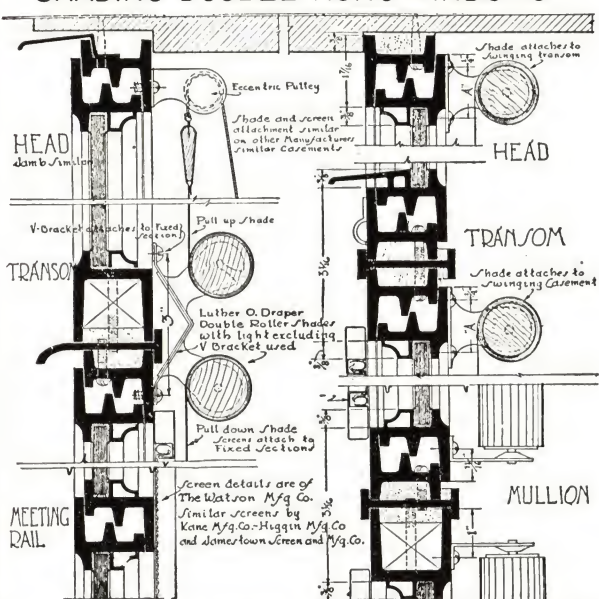
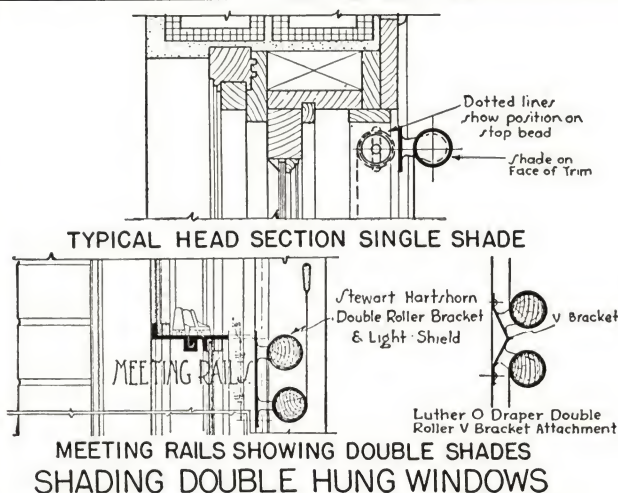
Shades for Special Conditions — Sky Lights, etc.

Practical information on special installations is available at all times at the General Office of Stewart Hartshorn Company, 250 Fifth Avenue, New York, New York.

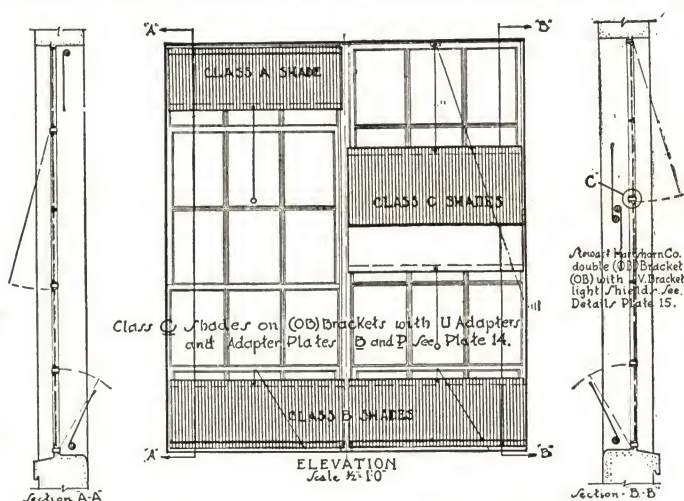
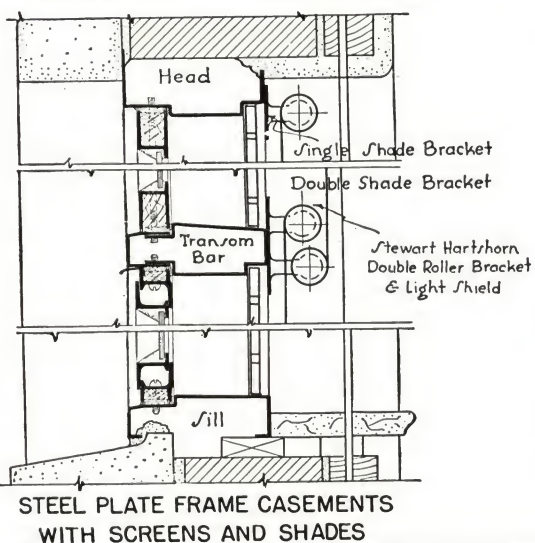


Three Types of Jamb Installations of Shadow Boxes. (Details Courtesy of National Window Shade Co.)

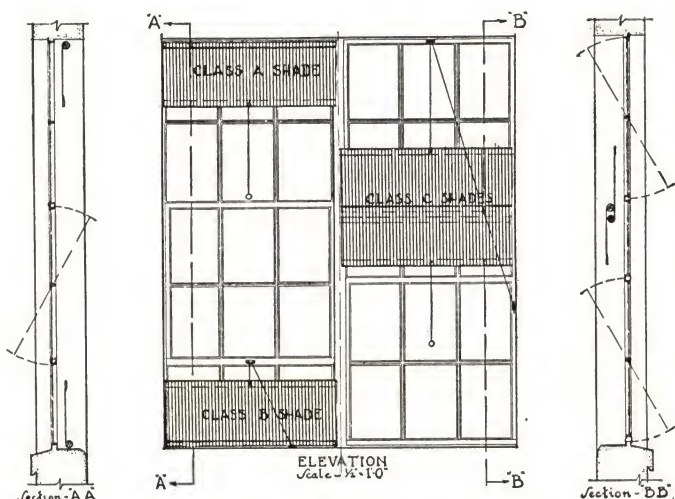
DETAILS OF VARIOUS METHODS OF INSTALLING SHADES



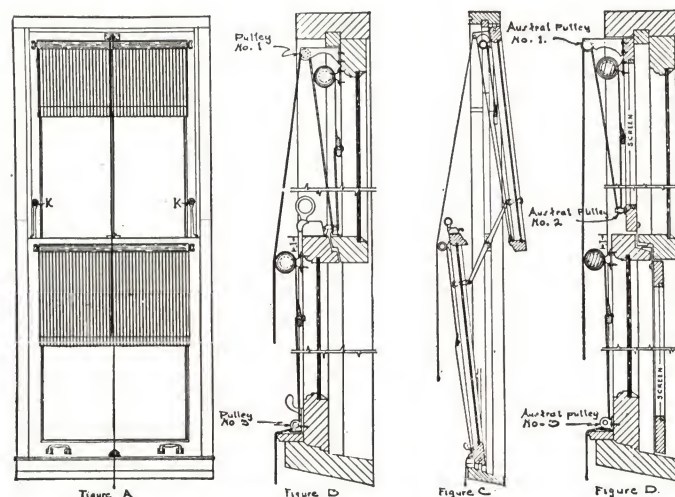
OUT SWINGING CASEMENT SHADING IN SWINGING CASEMENT SHADING



COMMERCIAL PROJECTED WINDOWS



PIVOTED STEEL WINDOWS



AUSTRAL WINDOWS

HARTSHORN SPRING SHADE ROLLERS

The Standard Roller of Architects, Decorators and Owners

SINCE 1860

Stewart Hartshorn Company have been manufacturing high grade automatic spring shade rollers since 1860. During that time Hartshorn Rollers have been recognized by architects and builders as standard equipment for all types of buildings.

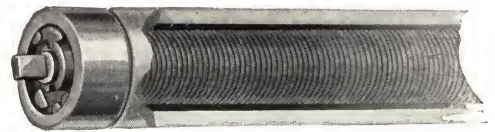
Steel wire tempered to high specification in Hartshorn's own wire mill and wound into more durable springs than are found in ordinary rollers have made Hartshorn Rollers the standard of comparison.

HARTSHORN SPRINGS

The springs, which are a most vital part of a shade roller, are produced from wire manufactured by Hartshorn in its own wire mill. A very carefully selected High Carbon rod to Hartshorn Specification is procured from the steel mills. All cold drawing, intermediate heat-treatment, cold rolling and tempering operations are conducted in Hartshorn's own mill. The furnaces employed in all heat-treating operations are fired by gas of Hartshorn's own manufacture. All temperatures are automatically controlled, which results in a very uniformly tempered steel wire approximating 300,000 pounds per square

inch ultimate tensile strength. Controlling the manufacture of our own wire, accounts for the fact

that Hartshorn springs do not break down. Springs made for Hartshorn metal rollers are of larger wire than those for use in Hartshorn wood rollers since the metal rollers are expected to give longer service and to handle heavier loads. The most important factor in a shade roller is the life of the spring.



HARTSHORN AUTOMATIC SPRING WOOD SHADE ROLLERS

Have barrels made from well seasoned kiln dried white pine; finely tempered steel wire springs, produced in Hartshorn's own wire mill; moving parts which consist of brass pawls and rivets mounted on a copper plated steel cup that revolves on a brass bearing, will not rust or stick and insure smooth, silent action; aluminum shells which will not rust or tarnish enclose the mechanism at one end of the roller. Aluminum pin ends protect the solid end.



HARTSHORN ADJUSTABLE METAL ROLLERS For Most Satisfactory Service

Made of high grade open hearth steel, heavily tin plated. Powerful springs made of finely tempered steel wire produced in Hartshorn's own wire mill; brass pawls and copper plated stamped steel parts make this roller smooth running and rust proof. Extension plugs in the ends permit the lengthening of these rollers in proportion with the diameter of the roller.



THE TYPE OF ROLLER TO SELECT

On most residential types of buildings where light weight translucent or semi-opaque shades are used and where the window sizes are fairly small, the Hartshorn wood barrel shade rollers have sufficient spring power to handle the shades satisfactorily. However, where the window widths are over four feet and the height is over ten feet or where the shade cloth used is heavy opaque cloth, Hartshorn metal rollers are recommended. Hartshorn metal rollers should be specified on all

schools, hotels, offices, factories or other public buildings regardless of size of window and type of shade cloth used. Their sturdy construction and excess spring power added to the fact that they can be used again and again with new sets of shades make them much more economical for these types of installations. Send for our schedule showing diameter and style of roller recommended for use on various sizes of window shades.

HARTSHORN SPRING AWNING ROLLERS

All Metal Rust-Proofed, Adjustable Length

HARTSHORN SPRING AWNING ROLLERS

Hartshorn All-metal Galvanized Spring Awning Rollers are made with patented all-metal extension; are rustproof and easily adjustable. Can be used for several sets of awnings. Made in 1½, 1¾, 2¼, 3 and 4-inch diameters. (The 3 and 4-inch diameters are made only with the regular wood plug extension). All exposed parts are electro-galvanized, making them completely rust-



proof. The powerful springs of finely tempered steel wire, produced in Hartshorn's own wire mill, can be adjusted to lift the heaviest awning. The awning canvas can be sewed to a strip of strong Holland shade cloth supplied with each roller.

TYPICAL SPECIFICATION FOR WINDOW SHADES

General—These specifications cover the manufacture and correct installation of window shades (including labor, material, and all appliances and accessories) at the given address, so as to provide a complete installation ready for use. Accurate measurements are to be taken at the building and all conditions noted by the contractor. Shades to be made in a thoroughly workmanlike manner, cut square and true and mounted on rollers in the same manner. The materials used in the manufacture of these shades must be commercially perfect and of first quality. All shades to be free from dirt, fingermarks, etc., and subject to final acceptance by the owner.

Charge of Work—Owners shall have the general supervision and direction of work. They shall pass upon materials, workmanship and installation, and may reject such as in their judgment is not in accordance with contract or specification.

Scope of Work—(State here whether shades are to be double hung—that is, two shades mounted in the center of sash so that the top shade rolls down and the lower shade rolls up (school installation)—or whether the shades are to be mounted at top of the sash to roll down, or any other type of installation that may be required. State also windows that will not require shades or any other information bearing on the installation and requirements pertaining to the job.

Cloth—Shades to be made of Hartshorn Joanna Cambric as manufactured by the Stewart Hartshorn Company. This cloth to have a smooth, satin finish and to be sunproof and waterproofed and to be free from filling. (Alternate prices on Washable Diana Cloth, Hartshorn Oswego Tint Cloth, or if lightproof window shades are desired Vulcan Shadowless Triplex, as manufactured by the Stewart Hartshorn Company.)

Length—Cloth for all shades to be *finished* 9 inches longer than actual window openings and of correct width. (Optional)—Shades that are to be installed on face of casings to have the cloth cut 4 inches wider than width of window opening, so as to allow a 2 inch lap on each side.

Color—Color to be specified by architect. (State whether solid or duplex color is required.)

Rollers—All shades to be mounted on genuine Hartshorn Script Label (wood or metal rollers). Metal rollers to be made of the best grade open hearth steel heavily plated with tin and fitted with a groove for attaching shade fabric. Rollers to be of a diameter guaranteed to carry the shade. (State diameter required.)

Slats—7/8, 1¼, 1½, 1¾, 2 or 2½-in. white pine slats to be placed in hems of all shades. Slats to be cut ¼ in. less than width of cloth.

Eyelets—Shades to be equipped with stainless metal eyelets fastened through the center of slat for attaching of shade cord or shade pull.

Cord—All shades to be equipped with No. 2, 3½, or 4 braided cord (ring pull) to match color of shade and to be attached to slat and fastened to the window jamb with suitable length of cord to allow for the operation of the shades.

Hems—Shades shall be equipped with (side hems or plain side or reinforced pocket). Slat hems for all shades shall be securely sewed, back-stitched and tied.

Brackets—If attached to solid metal sash or frame, screw holes to be drilled and tapped and brackets installed with machine screws. If hollow metal sash and frame, screw hole to be drilled, brackets installed with Hartshorn's Expansible Screw Grips or a case hardened self-threading screw. If attached to wood sash or frame, brackets to be installed with regular wood screws. Brackets to be installed in such a manner so as to assure true alignment when rollers are placed therein. (On installations where stop pulleys are required, the same method of attaching them will be used as stated in the installation of brackets.)

Delivery—All shades shall be installed complete by or any other date agreed upon in writing by the owner.

HARTSHORN DEALERS

We shall be glad to recommend to you a reliable Hartshorn dealer in your vicinity.

Hartshorn dealers are practical, hard-headed business men who have found that quality pays better than low prices.

Their prices are not exorbitant but will be based on good materials plus reliable workmanship plus a fair profit.

There may be dealers in your City who will quote you lower prices than the Hartshorn dealer but in the end you will find that you get just what you pay for. The saving of a few cents is soon lost when the spring of a roller breaks down or the cloth in the shade becomes wrinkled and broken.

STEWART HARTSHORN COMPANY

250 FIFTH AVENUE, NEW YORK, NEW YORK

Factories

Oswego, N. Y. Muskegon, Michigan Newark, N. J.
San Francisco, Calif. Toronto, Canada